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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/750,293 | 12/29/2000 | Thomas P. Brady | 3175-51A | 6518 |
| 21013 | 7590 | 04/09/2004 | EXAMINER | |
| AGFA CORPORATION LAW & PATENT DEPARTMENT 200 BALLARDVALE STREET WILMINGTON, MA 01887 | | | SIANGCHIN, KEVIN | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2623 | 10 | |
| DATE MAILED: 04/09/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/750,293 | BRADY, THOMAS P. |
| | Examiner | Art Unit |
| | Kevin Siangchin | 2623 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 and 6-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4 and 6-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 04 March 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

Detailed Action

Drawings

Response to Amendments to the Drawings

1. Figures 1-3 and newly supplied figures 4-5 were received on March 4, 2004. These drawings are approved.

Specification

Response to Amendments to the Specification

2. The substitute specification filed March 4, 2004 has not been entered because it does not conform to 37 CFR 1.125(b) and (c).
3. Non-compliance with 37 CFR 1.125(b) and (c) arise because the substitute specification because it introduces new matter into the disclosure. The added material which is not supported by the original disclosure is as follows:

“...[I]f while in the second mode, the processor determines that PackBits compression is appropriate, e.g. when presented with a string of repeating 0s or 1s, the processor may switch to using PackBits as the compression technique until it is no longer appropriate”. See page 7, paragraph [0022] of the substitute specification.

4. This addition to the specification is construed here as meaning the processor dynamically changes compression techniques as it receives streams of input image data. In other words, the decision to switch between compression techniques, while operating in the second mode, is made per bit, byte or whatever the fundamental image data unit is. This is not consistent with the original disclosure (or even parts of the amended specification), where the decision is made at a page level. See, for example, lines 14-26 of the original specification and paragraph [0023] in the amended specification.

Claims

Preface

5. The purpose of this section is to properly resolve the claim rejections under U.S.C. § 103(a) put forth in the previous Office Action. The statements of rejection for claims 2-3, 7-8, and 12-13 in the previous office action contain typographical errors that result in the improper citation of the prior art serving as the basis of these rejections. It must be stressed, however, that, while the prior art was improperly cited in these statements of rejection, the basis and substance of the rejections remain valid. The supporting statements that follow the erroneous statements of rejection constitute the grounds and substance of those rejections under U.S.C. § 103(a) and were predicated upon the intended citation of the prior art. This should be evident upon their reading.

6. The following are the statements of the rejections of claims 1-15, under claims 1-15 U.S.C. § 103(a), as they were intended to appear in the previous Office Action.

7. Claims 1, 6, and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anzai (U.S. Patent Number 6,009,242) in view of Zimmerman (U.S. Patent Number 5,535,311).

8. Claims 2-3, 7-8, and 12-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anzai, in view of Zimmerman, in further view of Onondera (U.S. Patent 6,181,435).

9. Claims 4, 9, and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anzai, in view of Zimmerman, in further view of Ancin et al. (U.S. Patent 6,181,435).

10. Claims 5, 10, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anzai, in view of Zimmerman, in further view of Ancin et al. (U.S. Patent 6,181,435) and Onondera.

11. Since the statements given in the previous Office Action supporting these rejections remain valid, the validity of the Examiner's arguments given below, and any other arguments of the Examiner that may reference these rejections, are not diminished by the erroneous statements of rejections discussed above.

Response to Amendments to the Claims

12. The amendment to the claims filed March 4, 2004 has been entered into the record and the claims have been amended accordingly. Claim 5 has been cancelled.

Response to Arguments and Remarks

The following is in regard to the Applicant's response to rejections made under 35 U.S.C. § 112(2). Please refer to page 8 of the Applicant's Response and pages 5-7 of the previous Office Action.

13. The amendments to claims 1-4 and 14 resolve the ambiguity discussed in paragraphs 8, 9 and 11 of the previous Office Action. The basis for the ambiguity of claims 3 and 13, discussed in paragraph 10 of the previous Office Action, has been withdrawn. As a result, the Applicant has overcome the 35 U.S.C. § 112(2) rejections for claims 1-3, 6-7, and 10-13.

14. The amendment to claim 4 resolves the ambiguity addressed in paragraph 11 of the previous Office Action. While a similar issue still remains in claim 14, the language of claim 14, though excessively complicated, does not render the claim indefinite. Therefore, the basis for the ambiguity brought about by using the phrase, "...if so..." and "...if not...", as discussed in paragraph 11 of the previous Office Action, is withdrawn.

15. The ambiguity discussed in paragraph 12 of the previous Office Action (i.e. the lack of a precise meaning of the word *primarily* as it relates to the Applicant's claimed invention) has not been properly addressed by the Applicant in his/her amendments to the specification and/or claims. Clearly, primarily white or primarily black means that the majority of the pixels of the image are, respectively, white or black. Furthermore, it can be understood from the specification that Applicant treats such images as template images which presumably have a relatively small section of calibration information in relation to the large black or white remaining portions of the image. While this determination can be made in light of the specification, simply identifying these images as being primarily white or primarily black can result in some confusion. For example, a picture of a night sky may be measurably primarily black, yet still contain a substantial amount of connected or dispersed color and certainly would not qualify as a template image. In this way, simply identifying these images as being primarily white or primarily black, as in amended claims 4, 8-9, and 14 and new claims 17-18, fails to define the Applicant's claimed invention according to its disclosure in the specification. See the remarks below.

16. In summary, the Applicant has overcome the 35 U.S.C. § 112(2) rejections for claims 1-3, 6-7, and 10-13. However, the rejections still hold for claims 4, 8-9 and 14. Also, as per the discussions below, claims 8, as amended, and new claims 17 and 18 contain language that does not satisfy the requirements of 35 U.S.C. § 112(2).

The following is in regard to the Applicant's response to rejections made under 35 U.S.C. § 103(a). Please refer to pages 12-14 of the Applicant's Response and pages 7-19 of the previous Office Action. The Applicant's arguments filed on March 4, 2004 have been acknowledged and fully considered, but fail to be persuasive.

17. *The following is in regard to the Applicant's assertion that the cited prior art does not teach or suggest Independent Claim 1.* The applicant asserts that "neither Anzai, Zimmerman, Onondera, or Ancin, alone or in combination, teach or suggest at least 'to operate in a first mode to encode the stored sequence of characters if the sequence of characters is determined to correspond to the banded image' and 'to operate in a second mode, different than the first mode, to encode the stored sequence of characters if the stored sequence of characters is determined correspond to a page image'.

18. First, in regard to claim 1, as it was originally posed and as it is currently amended, Onondera and Ancin were not used in rejecting this claim and thus the Applicant's subsequent arguments, relating to these references, are not relevant to claim 1.

19. It was shown in the previous Office Action that the combination of Anzai and Zimmerman, indeed, teaches an encoder that operates in a first mode to encode the stored sequence of characters if the sequence of characters is determined to correspond to the banded image. Specifically, Anzai teaches an encoding apparatus including the determination of whether image data is representative of a band image or a page image. The applicant correctly observes that Anzai does not explicitly teach an encoding apparatus that operates in two distinct encoding modes to encode a sequence of characters corresponding to a page image and a banded image. However, Zimmerman illustrates the usage of multiple compression schemes in an encoding apparatus, where a compression scheme is selected among plural compression schemes that best suits, in terms of achievable compression performance, the properties of the input image(s). It was argued in the previous Office Action that the critical properties of images, in the encoder taught by Anzai, is their distinction as either page images or banded images. Given this, it would have been obvious to one of ordinary skill in the art, at the time of the applicant's claimed invention, to combine the teachings of Anzai and Zimmerman so as to yield an encoder that encodes using a first compression scheme (first mode of encoding), optimal for banded images, when a banded image presents itself, and encodes using a second compression scheme (second mode of encoding), optimal for page images, when a page image presents itself.

Therefore, despite the Applicant's allegations, the teachings of Zimmerman do, indeed, remedy the deficiencies of Anzai and their combination would have been obvious to one of ordinary skill in the art, at the time of the Applicant's claimed invention, and would, in turn, satisfy the limitations of claim 1, as originally posed and as amended.

20. In regard to the Applicant's exposition of the what Zimmerman does and does not teach (paragraph 4 of Applicant's response), the Applicant correctly asserts the following. Zimmerman does not teach the determination of band or page images. However, Zimmerman was not cited for this teaching. As discussed above, Anzai teaches such a determination. Zimmerman does determine the average number of 0-1 and 1-0 transitions, generates a transition array, and then based on the average number of transitions identifies the data compression technique. It should be noted, however, that Zimmerman is not relied upon for these teachings and, moreover, these teaching do not, in any way, detract from the teachings of Zimmerman relating to the usage of multiple compression schemes in an encoding apparatus, where a compression scheme is selected among plural compression schemes that best suits, in terms of achievable compression performance, the properties of the input image(s).

21. Finally, the remainder of the Applicant's arguments, relating to claim 1, are drawn to how the additional prior art references (i.e. Onondera and Ancin) fail to remedy the deficiencies of Anzai. It was shown in the previous Office Action, and elucidated above, that the teachings Zimmerman sufficiently address the deficiencies of Anzai. Therefore, the subsequent arguments relating to claim 1 are moot. The rejection of claim 1, as originally posed and as amended, under 35 U.S.C. § 103(a) still holds (see below). Claims dependant on claim 1 are treated below.

22. *The following is in regard to the Applicant's assertion that the cited prior art does not teach or suggest Independent Claims 6 and 11.*

23. The subject matter claimed in claims 6 and 11 is substantially the same as that which is claimed in claim 1. Therefore, the arguments present above regarding claim 1, are applicable to claims 6 and 11. Therefore, the 35 U.S.C. § 103(a) rejections of claims 6 and 11, as originally posed and as amended, under 35 U.S.C. § 103(a) still hold (see below). Claims dependant on claim 6 and 11 are treated below.

Rejections Under 35 U.S.C. § 112(1)

24. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

25. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. See amended claim 8 (page 4 of the Applicant's response) – in particular, "... encoding the received data in accordance with the first encoding technique if the received data is ... one of primarily white page image data and primarily black page image data".

26. The amendment effectively changes claimed encoding method so that the method encodes differently to what was claimed originally and currently disclosed in the specification. In particular, the amended language of claim 8 implies that the determination as to whether the image is one of primarily white and primarily black occurs even when it been determined that the image is a banded image (that determination having been made in accordance with parent claim 1). The specification, even as amended, suggests that the determination as to whether the image is one of is primarily white and primarily black occur only when the image has been determined to be a page image. In the subsequent portions of this document, Claim 8 will be treated as it was originally posed.

Rejections Under 35 U.S.C. § 112(2)

27. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

28. Claims 4, 8, 9, 14, 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

29. As noted in the previous Office Action, these claims contain the ambiguously defined terms *primarily white* and *primarily black*. See the discussion in paragraph 15 above. For the remainder of this document, these terms will be given their literal interpretations – i.e. a primarily black or primarily white image is one with the majority of its pixels being black or white, respectively.

Rejections Under 35 U.S.C. § 103(a)

30. Please note that the previous Office Action is incorporated herein by reference.

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claim 1, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anzai (U.S. Patent Number 6,009,242) in view of Zimmerman (U.S. Patent Number 5,535,311).

33. *The following is in regard to Claims 1, 6, and 11.* In the amended claim 1, the Applicant refers to a *stored* sequence of characters representing an image, as opposed to a *first* sequence of characters representing an image. It should be clear that any sequence of characters (e.g. a first sequence, a second sequence, etc.), in a digital system or method operating on digital data, would necessarily be a stored sequence of characters. The same observation applies to claims 6 and 11. Therefore, the rejections of claims 1, 6 and 11 advanced in the previous Office Action are respectively applicable to the Applicant's amended claims 1, 6, and 11. For the sake of brevity, the details of those rejections are omitted here. Please refer to the previous Office Action.

34. Claims 2-3, 7-8, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anzai, in view of Zimmerman in further view of Onondera (U.S. Patent 6,181,435).

35. *The following is in regard to Claims 2-3, 7-8, and 12-13.* As in the discussion above relative to claims 1, 6 and 11, the amended claims 2-3 are substantially the same as the original claims 2-3. Therefore, the rejections of claims 2-3 advanced in the previous Office Action are respectively applicable to the amended claims 2-3. Claims 7-8 and 13 have not been amended (recall how claim 8 is being considered in this document). Therefore, the rejections of these claims put forth in the previous Office Action still hold. In the previous Office Action, claim 12 was

assumed to be dependant on claim 11. Therefore, the rejection of claim 12 in the previous Office Action is applicable to the amended claim 12. For the sake of brevity, the details of the rejections of claims 2-3, 7-8, and 12-13 made in the previous Office Action are omitted here. Please refer to the previous Office Action.

36. Claims 4, 9, 14, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anzai, in view of Zimmerman in further view of Ancin et al. (U.S. Patent 6,038,340).

37. *The following is in regard to Claim 4 and 17-18.* As discussed above, the teachings of Anzai and Zimmerman can be combined in such as to satisfy all limitations of claim 1. This was illustrated in the previous Office Action. The original claim 4 recites the following:

An encoder according to claim 1, wherein: if the first sequence of characters is determined to correspond to the page image, the processor is further configured to determine if the stored first sequence of characters corresponds to one of a primarily white page image and a primarily black page image, and, if so, to encode the stored first sequence of characters in accordance with a first compression technique while operating in the second mode of operation, and, if not, to encode the stored first sequence of characters in accordance with a second compression technique, different than the first compression technique, while operating in the second mode of operation.

Clearly, the claimed subject matter of claim 4, as originally posed, encompasses the subject matter claimed in amended claim 4 (i.e. “an encoder according to claim 1, wherein if the first sequence of characters is determined to correspond to the page image, the processor is further configured to determine if the stored first sequence of characters corresponds to one of a primarily white page image and a primarily black page image”), new claim 17 (i.e. “An encoder according to claim 1, wherein if the first sequence of characters is determined to correspond to the page image, the processor is further configured to determine if the stored first sequence of characters corresponds to one of a primarily white page image and a primarily black page image, and, if so, to encode with a first compression technique while operating in the second mode of operation”), and new claim 18 (i.e. An encoder according to claim 1, wherein if the first sequence of characters is determined to correspond to the page image, the processor is further configured to determine if the stored first sequence of characters corresponds to one of a primarily white page image and a primarily black page image, ... and, if not [corresponding to one of a primarily white page image and a primarily black page image], to encode the stored first sequence of characters in accordance with a second compression technique, different than the first compression technique, while operating in the second mode of operation”). Therefore, arguments presented in the previous Office Action, regarding the 35 U.S.C. § 103(a)

rejection of claim 4, are applicable to current 35 U.S.C. § 103(a) rejections of amended claim 4 and new claims 17-18. For the sake of brevity, the details of these arguments will be omitted here. Please refer to paragraphs 23-31 on pages 12-15 of the previous Office Action.

38. *The following is in regard to Claim 9.* The amendment to claim 9 does not substantially change the subject matter claimed. Therefore, the rejection of claim 9 put forth in the previous Office Action is applicable to the amended claim 9. The details of this rejection are omitted here. Please refer to paragraph 37 on page 16 of the previous Office Action.

39. *The following is in regard to Claim 14.* Claim 14 is unchanged. Therefore, the rejection of claim 14 put forth in the previous Office Action still holds. Please refer to paragraph 45 on page 19 of the previous Office Action.

40. *The following is in regard to Claim 16.* Again, notice that the subject matter claimed in Applicant's original claim 4 encompasses the claimed subject matter of claim 16. To see this, refer to the excerpt of the Applicant's original claim 4 above. Specifically, that claim recites, "to encode the stored first sequence of characters in accordance with a first compression technique while operating in the second mode of operation". Clearly, this addresses the subject matter of Applicant's new claim 16. Therefore, arguments presented in the previous Office Action, regarding the 35 U.S.C. § 103(a) rejection of claim 4, are applicable to current 35 U.S.C. § 103(a) rejections of claims 16. For the sake of brevity, the details of these arguments will be omitted here. Please refer to paragraphs 23-31 on pages 12-15 of the previous Office Action.

41. Claims 10, 15, and 19-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anzai, in view of Zimmerman, in further view of Ancin et al. (U.S. Patent 6,181,435) and Onondera.

42. *The following is in regard to Claim 10.* Parent claim 9 was addressed above. Claim 10 is unchanged. Therefore, the rejection of claim 10 put forth in the previous Office Action still holds. Please refer to paragraph 38 on page 16 of the previous Office Action.

43. *The following is in regard to Claim 15.* Claim 15 is unchanged. Therefore, the rejection of claim 15 put forth in the previous Office Action still holds. Please refer to paragraph 46 on page 19 of the previous Office Action.

44. *The following is in regard to Claims 19.* As discussed above, the Applicant's original claim 4 claims subject matter that entails that which is claimed by the Applicant's claim 17. Furthermore, Applicant's canceled claim 5, which depends on original claim 4, states: "An encoder according to claim 4, wherein the first compression technique is a pack-bit technique ...". It should thus be clear that canceled claim 5 claims subject matter encompassing that which is claimed in Applicant's new claim 19. Therefore, arguments presented in the previous Office Action, regarding the 35 U.S.C. § 103(a) rejection of claim 5, are applicable to current 35 U.S.C. § 103(a) rejections of claims 19. For the sake of brevity, the details of these arguments will be omitted here. Please refer to paragraph 32 on page 15 of the previous Office Action.

45. *The following is in regard to Claims 20.* As discussed above, the Applicant's original claim 4 claims subject matter that entails that which is claimed by the Applicant's claim 18. Furthermore, Applicant's canceled claim 5, which depends on original claim 4, states: "An encoder according to claim 4, wherein ... the second compression technique is a LZW technique". It should thus be clear that canceled claim 5 claims subject matter encompassing that which is claimed in Applicant's new claim 20. Therefore, arguments presented in the previous Office Action, regarding the 35 U.S.C. § 103(a) rejection of claim 5, are applicable to current 35 U.S.C. § 103(a) rejections of claims 20. For the sake of brevity, the details of these arguments will be omitted here. Please refer to paragraph 32 on page 15 of the previous Office Action.

Conclusion

46. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

47. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee

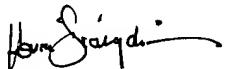
pursuant to 37 C.F.R. § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Siangchin whose telephone number is (703)305-7569. The examiner can normally be reached on 9:00am - 5:30pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Siangchin



Examiner
Art Unit 2623

ks - 04/02/04



AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600